

REMARKS

This submission is in response to the Official Action dated June 9, 2004. Reconsideration of the above identified application, in view of the above amendments and the following remarks, is respectfully requested.

I. Status of the Claims

Claims 1-3 and 19-21 have been canceled without prejudice or disclaimer of the subject matter therein.

Claims 4-18, and 22-26 have been amended.

No new matter is added.

Claims 4-18 and 22-26 are presently pending.

Claims 1-26 stand rejected.

Claims 7-24 have been objected to.

The Examiner has objected to claims 7-24 for informalities. Claims 7-12 have been amended to change "image capturing means" to "image capturing devices," as suggested by the Examiner. Claims 7-12 have been amended to change "a recording means" to "said recording means." Claims 7-18 and 22-24 have been amended to change "image capturing means" to "image capturing device," as suggested by the Examiner. Claims 19-21 have been canceled without prejudice or disclaimer of the subject matter therein. Thus, Applicants respectfully request that the above objections to claims 7-24 be withdrawn.

II. Status of the Specification

The Examiner also objected to the Specification for incorrectly stating "a shutter 35" on page 17, line 9, "an aperture 36" on page 17, line 14, and "image date" on page 18, line 12, of the Specification. The Examiner has also objected to the Title for not being descriptive.

The Specification has been revised to correct the typographical errors by replacing "a shutter 35" with "an aperture 35"; by replacing "an aperture 36" with "a mechanical shutter 36"; and by replacing "image date" with "image data," as suggested by the Examiner. Furthermore, the Title has been changed from "Image Capturing Apparatus" to "Image Capturing Apparatus With Multiple Image Capturing Devices Having Different Characteristics." No new matter has been added. Thus, Applicants respectfully request that the objection be withdrawn.

III. 35 U.S.C. § 102(e) and § 103(a) Rejections

Claims 1-12, 19-24, and 26 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,639,626 to Kubo et al. (hereinafter "Kubo"). Claims 13-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of U.S. Patent No. 4,805,024 to Suzuki et al. (hereinafter "Suzuki"). Claims 16-18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of U.S. Patent No. 6,654,057 to Rhodes. Claim 25 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of U.S. Patent No. 5,986,764 to Nonaka. Applicants respectfully traverse these rejections, and reconsideration is respectfully requested.

Kubo discloses an image capturing device having a first image sensor 58 with an adjustable output region and a second image sensor 63 with a higher number of pixels (Kubo, column 15, lines 61-65). An image processor 80 combines a portion of the image obtained from the first image sensor 58 with a portion of the image obtained from the second image sensor 63 (Kubo, column 16, lines 12-15), and a pair of frames of data from the sensors are stored in an image memory 91 (Kubo, column 16, lines 59-61). The single light path L is divided into two paths and each path leads to the respective sensor 58, 63. Thus, each sensor 58, 63 captures an image of the same position.

Claims 22, 23, and 24 have been amended to be in independent form, and each of these claims is directed to an image capturing apparatus that includes a first optical system and a second optical system, each of which is independent from each other. Claims 22, 23, and 24 also

set forth a processing means for correcting a difference in image capturing position between the first optical system and the second optical system. As shown in Fig. 2, the first optical system supplies image data at one image capturing position, e.g., light F1, to the first image capturing device and the second optical system supplies image data at another image capturing position, e.g., light F2, to the second image capturing device. The image data is supplied separately from each of the optical systems to the respective capturing devices since the two optical systems each capture an image at a different image capturing position.

The Examiner contends that Fig. 10 of Kubo shows that Kubo's mirror M5 serves as a first optical system and Kubo's prism 61 serves as a second optical system. As shown in Fig. 10, a single light path L is received by the mirror M5 and is divided in two so that a portion of the light L is transmitted through the mirror M5 and the other portion is transmitted to the prism 61 (Kubo, column 14, lines 39-52). Therefore, the image data must be transmitted through Kubo's mirror M5 before reaching Kubo's prism 61, and the image data transmitted through Kubo's mirror M5 and prism 61 corresponds to an image of the same position. However, Kubo does not disclose a processing means for correcting a difference in image capturing position between two optical systems, as set forth in the present invention. The Examiner contends that Kubo's image processor 80 corrects a difference in image capturing position. However, Kubo states the following:

Because the image quality of the first image sensor 58 is higher than that of the second image sensor 63, the stitching portion of the two images may be conspicuous due to the different image qualities.

In order to make the stitching portion inconspicuous, the output C from the first image sensor 58 is overlapped with the output D from the second image sensor 63, as shown in FIG. 17. The overlapped portion F, the starting and ending points of which are indicated by "a" and "b", is further processed so that the image quality of one image naturally fuses into that of the other image. (Emphasis added.)

Thus, the output C from the first image sensor 58 is overlapped with the output D from the second image sensor D, and the overlapping portion F of the outputs C and D is processed to

correct the difference in image qualities. Kubo does not disclose or suggest correcting a difference in image capturing positions. Since Kubo captures an image at the same position, it is not necessary to correct Kubo's image for a difference in image capturing positions. Thus, Kubo and the other cited prior art do not disclose or suggest all of the elements of the claimed invention.

Claims 1-3 and 19-21 have been canceled without prejudice or disclaimer of the subject matter therein. Hence, the rejection of claims 1-3 and 19-21 has been rendered moot.

Claims 4-18, 25, and 26 have been amended to depend from claims 22, 23, and 24, and are therefore also patentable for at least the same reasons.

Thus, Applicants respectfully submit that for at least the aforementioned reasons, claims 4-18 and 22-26 of the present invention are patentable over the prior art. Based on the foregoing, the rejections of claims 1-12, 19-24, and 26 under 35 U.S.C. § 102(e) and claims 13-18 and 25 under 35 U.S.C. § 103(a) should be withdrawn, and reconsideration is respectfully requested.

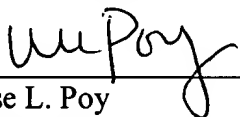
CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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